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New PCT National Phase Application  
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## SUBSTITUTE SPECIFICATION

### CIRCUIT ARRANGEMENT WITH A VOLTAGE LINK CONVERTER

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[0001] This application is the national phase under 35 U.S.C. § 371 of PCT International Application No. PCT/DE2003/02016 which has an International filing date of June 16, 2003, which designated the United States of America and which claims priority on German Patent Application number DE 102 28 825.9 filed June 27, 2002, the entire contents of which are hereby incorporated herein by reference.

#### Field of the Invention

[0002] The invention generally relates to a circuit arrangement having a voltage link converter. Preferably, the converter contains an intermediate-circuit capacitor and switching paths, which are arranged parallel therewith and have series-connected switching elements, a short-circuit thyristor being provided as protection against short-circuit currents and overvoltages.

[0003] These switching elements may be components which can be switched off, such as thyristors, in particular GTO thyristors with freewheeling diodes connected back-to-back in parallel.

#### Background of the Invention

[0004] A circuit arrangement is disclosed in the offprint from ZEV-DET Glasers Annalen, Issue 2/3 1994: Rudolf Wagner "Drehstrom-Antriebstechnik für Diesellokomotiven in Nordamerika" [Three-phase drive technology for diesel locomotives in North America]. The three-phase drive technology described therein requires the use of